

## 03060103-030

(Savannah River/ Lake Russell)

### General Description

Watershed 03060103-030 is located in Anderson and Abbeville Counties and consists primarily of the *Savannah River* and its tributaries from the Hartwell Dam to the Richard B. Russell Dam, forming *Lake Richard B. Russell*. The watershed occupies 107,778 acres of the Piedmont region of South Carolina. The predominant soil types consist of an association of the Cecil-Hiwassee-Davidson series. The erodibility of the soil (K) averages 0.26, and the slope of the terrain averages 10%, with a range of 2-15%. Land use/land cover in the watershed includes: 54.9% forested land, 27.9% agricultural land, 7.3% urban land, 6.3% water, 2.9% barren land, and 0.7% forested wetland.

The Savannah River flows out of the Hartwell Dam and flows into and through Lake Richard B. Russell. Streams flowing into the river from the Georgia side are connoted with an asterisk. Whitner Creek and Dye Creek merge to form Big Generostee Creek. After the confluence, Big Generostee Creek accepts drainage from Threemile Creek, Fivemile Creek, Richland Creek, Mountain Creek, Devil Fork Creek (Reedy Creek), Buckingham Creek, and Weems Creek. Downstream of Big Generostee Creek, the river accepts drainage from Cedar Creek\* and Little Generostee Creek (East Prong, Canoe Creek, Crooked Creek). Pickens Creek\* and Band Creek flow into the headwaters of Lake Russell, followed by Coldwater Creek\*, Allen Creek (Bowman Branch, Deal Creek), Van Creek\*, the Rocky River watershed, Beaverdam Creek\*, Calhoun Branch, and Beer Garden Creek (Manor Creek). There are a total of 195.6 stream miles and 8,643.9 acres of lake waters within the South Carolina portion of the watershed, all classified FW.

### Surface Water Quality

<u>Station #</u>	<u>Type</u>	<u>Class</u>	<u>Description</u>
SV-100	P	FW	LAKE RUSSELL AT SC 181, 6.5 MI SW OF STARR
SV-316	S	FW	BIG GENEROSTEE CREEK AT CO. ROAD 104
SV-101	BIO	FW	BIG GENEROSTEE CREEK AT SC 187
SV-109	BIO	FW	LITTLE GENEROSTEE CREEK AT SC 184
SV-098	P	FW	LAKE RUSSELL AT SC 72, 3.1 MI SW CALHOUN FALLS

**Lake Russell** – There are two monitoring sites along the main stem of Lake Russell. At the uplake site (**SV-100**), aquatic life uses are fully supported; however, there is a significant decreasing trend in dissolved oxygen concentration. Significant decreasing trends in five-day biochemical oxygen demand, turbidity, and total nitrogen concentration suggest improving conditions for these parameters. Recreational uses are fully supported at this site and a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter.

At the downlake site (**SV-098**), aquatic life uses are fully supported; however, there is a significant increasing trend in total phosphorus concentration. There is also a significant increasing trend in pH. Significant decreasing trends in five-day biochemical oxygen demand, turbidity, and total nitrogen concentration suggest improving conditions for these parameters. Recreational uses are fully supported at

this site and a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter.

**Big Generostee Creek** – There are two monitoring sites along Big Generostee Creek. At the upstream site (**SV-316**), aquatic life uses are fully supported. A significant increasing trend in dissolved oxygen concentration and significant decreasing trends in five-day biochemical oxygen demand and turbidity suggest improving conditions for these parameters. Recreational uses are not supported at this site due to fecal coliform bacteria excursions. In addition, there is a significant increasing trend in fecal coliform bacteria concentration. At the downstream site (**SV-101**) aquatic life uses are partially supported based on macroinvertebrate community data.

**Little Generostee Creek (SV-109)** – Aquatic life uses are fully supported based on macroinvertebrate community data.

*A fish consumption advisory has been issued by the Department for mercury and includes Lake Russell within this watershed (see advisory p. 83).*

## Groundwater Quality

<u>Well #</u>	<u>Class</u>	<u>Aquifer</u>	<u>Location</u>
AMB-055	GB	SAPROLITE	STARR
AMB-076	GB	PIEDMONT BEDROCK	STARR

All water samples collected from ambient monitoring wells **AMB-055** and **AMB-076** met standards for Class GB groundwater.

## NPDES Program

### Active NPDES Facilities

<i>RECEIVING STREAM FACILITY NAME PERMITTED FLOW @ PIPE (MGD)</i>	<i>NPDES# TYPE COMMENT</i>
BIG GENEROSTEE CREEK CITY OF ANDERSON/GENEROSTEE CREEK PIPE #: 001 FLOW: 9.5	SC0023752 MAJOR DOMESTIC
BIG GENEROSTEE CREEK HONEYWELL NYLON, INC./ANDERSON PIPE #: 001 FLOW: M/R	SC0000281 MAJOR INDUSTRIAL
EAST PRONG TOWN OF IVA/WESTSIDE WWTP B PIPE #: 001 FLOW: 0.378	SC0025828 MINOR DOMESTIC
RICHLAND CREEK HONEYWELL NYLON, INC./ANDERSON PIPE #: 002 FLOW: M/R PIPE #: 003 FLOW: M/R	SC0000281 MAJOR INDUSTRIAL

DYE CREEK  
 RYOBI MOTOR PRODUCTS/ANDERSON  
 PIPE #: 001 FLOW: 0.043

SCG250017  
 MINOR INDUSTRIAL

MOUNTAIN CREEK  
 UNITED UTILITIES/CHAMBERT FOREST SD  
 PIPE #: 001 FLOW: M/R  
 PIPE #: 002 FLOW: M/R

SC0024716  
 MINOR DOMESTIC

LAKE RUSSELL  
 SCPSA/JOHN RAINEY GEN. STA.  
 PIPE #: 001 FLOW: M/R

SC0048135  
 MAJOR INDUSTRIAL

## Nonpoint Source Management Program

### *Land Disposal Activities*

#### Landfill Facilities

*LANDFILL NAME*  
*FACILITY TYPE*

*PERMIT #*  
*STATUS*

STARR C & D AND LCD LANDFILL  
 C & D

041001-1201; DWP-101; DWP-033  
 ACTIVE

STARR LANDFILL – ANDERSON CO.  
 DOMESTIC

041001-1101  
 INACTIVE

## Growth Potential

There is a moderate to high potential for growth in this watershed, which contains portions of the City of Anderson and the Towns of Starr, Iva, Homeland Park, and Calhoun Falls. Anderson is currently one of the largest manufacturing areas in the upstate region. Growth of the manufacturing industry is dependent on infrastructural expansion, which is dependent on the capacity of existing facilities. Many wastewater treatment facilities have expanded and are able to support future growth.

Projected industrial development in this watershed runs along the U.S. Hwy 76 corridor from Anderson to Pendleton, along the S.C. Hwy 81 corridor from Anderson to Starr, and along the western side of Anderson on S.C. Hwy 28. Also a rail line runs between Iva and Starr to Anderson, a criterion for siting new industry. A relatively high growth area lies between the Towns of Lowndesville and Antreville and will be impacted along S.C. 81 by the development in Calhoun Falls, located near the Lake Russell Dam. Calhoun Falls has upgraded their treatment system, replacing the lagoon treatment system, and are better able to support future growth.